

Knowledge And Attitude Towards Road Traffic Safety Rules Among Secondary School Students

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Abstract- BACKGROUND OF THE STUDY – Road traffic accidents are the leading issues in healthcare sector. Road traffic accidents rates are high in teenagers and young adults. According to National Crime Records Bureau (NCRB) reported about 1,35,000 death occurs in India every year due to traffic collision. The main purpose to conduct this study was to understand the level of knowledge of teenagers on traffic safety rules and their attitude towards it.

STATEMENT OF THE PROBLEM – A study to assess the knowledge and attitude towards road traffic safety rules with a view to develop a pamphlet among students in selected school of Lucknow, Uttar Pradesh.

OBJECTIVES – To assess the level of knowledge regarding road traffic safety rules among secondary school students, to assess the attitude regarding road traffic safety rules among secondary school students, to find the association between the knowledge score and selected demographic variables and to find the association between the attitude score and selected demographic variables.

ASSUMPTION – They may have some knowledge regarding road traffic safety rules and have some positive attitude towards road traffic safety rules.

METHODOLOGY – Descriptive research design was used to conduct the study among 100 secondary school students. Study was conducted at New Bal Bharti School, Gomti Nagar, Lucknow. Here, purposive sampling technique was used. Tool consist of three sections-

Section – A: - Demographic variables.

Section – B: - Knowledge – Self structured questionnaire.

Section – C: - Attitude – Likert scale.

RESULT – Study finding reveal that the secondary school student's adequate knowledge score was 87% and inadequate knowledge score was 13% and $SD \pm mean = 0.8314 \pm 13.63$. The calculated χ^2 value is age is 61.79636 & $df = 3(7.82) p > 0.05$, the χ^2 value coming to school from home is 0.00700 & $df = 1(3.84) p < 0.05$, mode of travelling ($\chi^2 = 2.292$) & $df = 3(7.82) p < 0.05$, road traffic accident ($\chi^2 = 37.9945$) $df = 1(3.84) p > 0.05$, previous

information regarding traffic safety rules ($\chi^2 = 20.6$) $df = 1(3.84) p > 0.05$, sources of information regarding road safety rules ($\chi^2 = 3.587$) & $df = 3(7.82) p < 0.05$ and school distance from home ($\chi^2 = 9.28$) $df = 2(5.99) p > 0.05$. Thus it was found there is significant association between knowledge score and demographic variable such as age ($\chi^2 = 61.796$), road traffic accidents ($\chi^2 = 37.9945$), previous information regarding traffic safety rules ($\chi^2 = 20.6$), school distance from home ($\chi^2 = 9.28$) and there was no association with other variables.

Study finding reveal that the student favourable attitude was 93% and unfavourable attitude score was 7% and $SD \pm mean = 3.009 \pm 15.85$. the calculated χ^2 value is Age is 2.27 & $df = 3(7.82) p < 0.05$, the χ^2 value coming to school from home is 0.56 & $df = 1(3.84) p < 0.05$, mode of travelling ($\chi^2 = 2.822$) & $df = 3(7.82) p < 0.05$, road traffic accident ($\chi^2 = 0.0038$) & $df = 1(3.84) p < 0.05$, previous information regarding traffic safety rules ($\chi^2 = 3.162$) & $df = 1(3.84) p < 0.05$, sources of information regarding road safety rules ($\chi^2 = 5.328$) & $df = 3(7.82) p < 0.05$, and school distance from home ($\chi^2 = 1.234$) & $df = 2(5.99) p < 0.05$. Thus, shows that there was no significant association between level attitude and selected demographic variable.

CONCLUSION – The finding showed that the majority of secondary school students had adequate knowledge regarding road traffic safety rules.

INTRODUCTION

Traffic laws are the laws which govern traffic and regulate vehicles, while rules of the road are both the laws and the informal rules that may have developed over time depending upon the flow of traffic. Road safety is a major public health issue in India. Every day, thousands of people are killed and injured in the road accidents. More than half of the people killed in traffic crashes are children and young adults, aged between 05 and 19 years and the common cause for

this poor road safety situation in India, like poor traffic discipline and education, poorly maintained roads, lack of adequate traffic and road safety aids, wrong way driving on highway, poor traffic management during construction traffic without driving and vehicles license use the highway, a wide junction without channelization, footpath encroached.

Traffic rules are designed to protect one and other drivers on the road. Road traffic accident preventive strategies are – helmets for two wheelers riders, set the speed limits, enforcing alcohol limits, banning drivers from using handheld mobile phones. The government of every country plans some rules and regulations and applies them to the people of that country.

STATEMENT OF THE PROBLEM

“A study to assess the knowledge and attitude towards road traffic safety rules with a view to develop a pamphlet among secondary school students in a selected school of Lucknow, Uttar Pradesh.”

OBJECTIVES OF THE STUDY

1. To assess the level of knowledge regarding road traffic safety rules among secondary school students.
2. To assess the attitude regarding road traffic safety rules among secondary school students.
3. To find the association between the knowledge score and selected demographic variables.
4. To find the association between the attitude score and selected demographic variables.

HYPOTHESIS

H1 – There was a significant association between the knowledge score with selected demographic variable.

H2 – There was a significant association between the attitude score with selected demographic variable.

METHODOLOGY

RESEARCH APPROACH – The research approach indicates the basic procedures for conducting research, based on the nature of the problem and objective of the study. The research approach chosen for the study was Quantitative research approach.

RESEARCH DESIGN – It refers to overall strategies that one chooses to integrate different components of study. Here, descriptive research design had been used

for the study.

VARIABLES –

Demographic variable – Age, coming to school from home, mode of travelling, road traffic accidents, previous information regarding traffic safety rules, sources of information regarding road safety rules and school distance from home.

Research variable – Knowledge and attitude regarding road traffic safety rules.

RESEARCH SETTING – The study was conducted in New Bal Bharti School, Gomti Nagar, Lucknow, Uttar Pradesh. The selection of the study was done on the basis of feasibility and availability of the sample.

POPULATION – The populations for this study were secondary school students.

Target Population – Secondary school students of New Bal Bharti School, Gomti Nagar, Lucknow, Uttar Pradesh.

Accessible population – Students of 15-18 years of New Bal Bharti School, Gomti Nagar, Lucknow, Uttar Pradesh.

SAMPLE – The Sample selected for the study consists of secondary school students of New Bal Bharti School, Gomti Nagar, Lucknow, Uttar Pradesh.

SAMPLE SIZE – The size consists of 100 samples who were studying in New Bal Bharti School, Gomti Nagar, Lucknow, Uttar Pradesh.

SAMPLING TECHNIQUE – Purposive sampling technique

SAMPLING CRITERIA – The selected sample was based on the following inclusion and exclusion criteria.

- Inclusion criteria –

Secondary school students, who were willing to participate in this study.

Secondary school students, who were present during the period of data collection.

- Exclusion criteria –

Secondary school students, who were unwilling to participate in this study.

Secondary school students, who were not present at the time of the data collection.

TOOLS FOR DATA COLLECTION ARE DIVIDED INTO THREE SECTIONS –

- Section – A: - Demographic variables.
- Section – B: - Knowledge – Self structured questionnaire
- Section – C: - Attitude – Likert scale.

DESCRIPTIVE INFERENTIAL STATISTICS –

Descriptive statistics – Mean, median and standard deviation.

Inferential statistics – It includes Chi square test and relevant statistical technique. The data was analyzed in the form of tables, diagrams and graphs.

ETHICAL CONSIDERATION –

Administrative permission was obtained from principal, Sahara College of Nursing, Lucknow. Administrative permission was obtained from Principal, New Bal Bharti School, Gomti Nagar, Lucknow, Uttar Pradesh. Informed written consent was obtained from student’s prior pre-test. Purposes of

the study were explained and informed written consent was obtained from each study participant and confidentiality of the information was maintained throughout the study.

PLAN FOR DATA ANALYSIS – Analysis is a process of organizing and synthesizing the data so as to answer research question and test hypothesis. Analysis and interpretation of data is the most important phase of research process which include complication, editing, coding, classification and presentation of data.

Analysis was planned on the basis of objective and assumption. Both descriptive and inferential statistics was planned to be used for data analysis such as:

- Frequency and percentage
- Measurement of central tendency and dispersion: mean, median and standard deviation
- Chi-square test
- Likert scale

ANALYSIS AND INTERPRETATION

SECTION – A

Table – 1: Frequency and percentage distribution of secondary school students according to age group.

Variables	Category	Frequency	Percentage
Age	15 years	41	41%
	16 years	20	20%
	17 years	20	20%
	18years	19	19%
	Total	100	100%

From above table 1- it is evident that 41% secondary school students belong to the age group 15 years, 19% belong to the age group 18 years, 20% belong to the age group 16 years and 20% belong to age group 17 years.

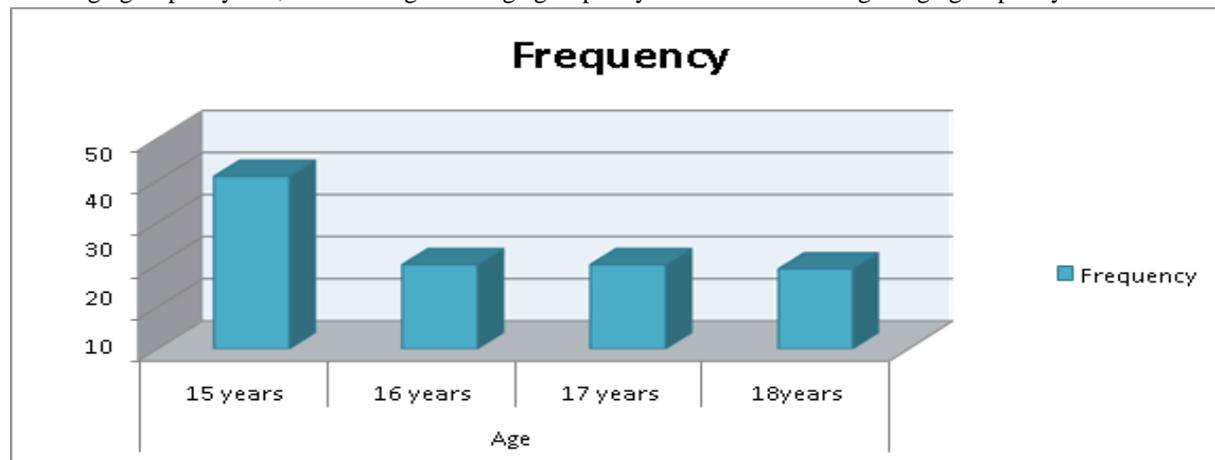


Figure no.2: Bar graph showing percentage distribution of secondary school students according to age.

Table – 2: Frequency and percentage distribution of secondary school students according to coming to school from home.

Variables	Category	Frequency	Percentage
Come to school from home	With parent	07	7%
	Self	93	93%
	Total	100	100%

From above table 2- it is evident that 93% of secondary school student were coming to school from home by self and 7% of secondary school student were coming to school with parents.

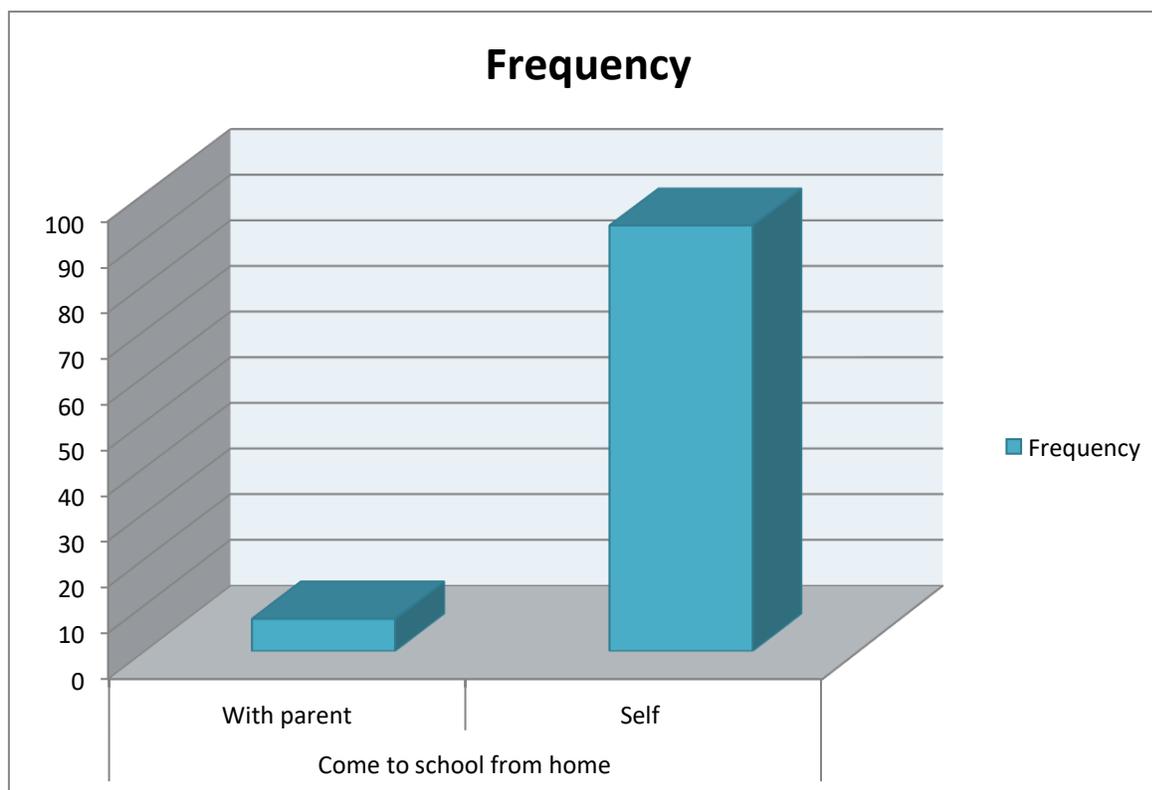


Figure no.3: Bar graph showing percentage distribution of secondary school students according to coming to school from home.

Table – 3: Frequency and percentage distribution of secondary school student according to their mode of traveling.

Variables	Category	Frequency	Percentage
Mode of travelling	Bicycle	42	42%
	Motor bike	10	10%
	Scooty	2	2%
	Pedestrians	46	46%
	Total	100	100%

From the above table 3- it is evident that 42% secondary school student's mode of traveling were bicycle, 10% were motor bike, 2% were scooty and 46% pedestrians.

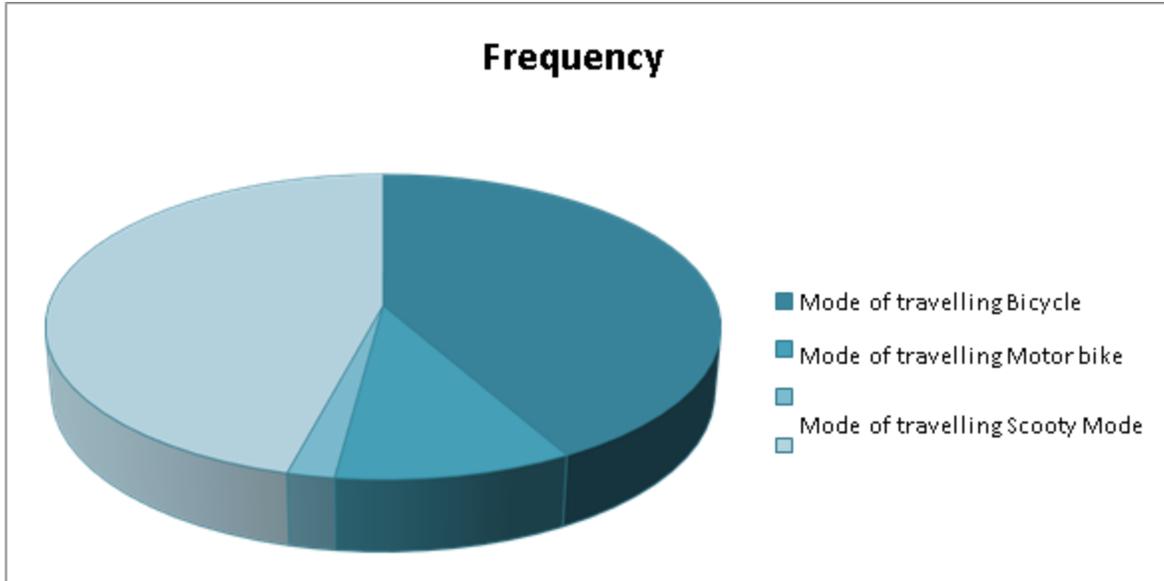


Figure no.4: Pie diagram showing percentage distribution of secondary school students according to mode of travelling

Table – 4: Frequency and percentage distribution of secondary school students who have ever met with a road traffic accident

Variables	Category	Frequency	Percentage
Ever met a road traffic accident	Yes	41	41%
	No	59	59%
	Total	100	100%

From the above table 4- it is evident that secondary school students have never met with road traffic accident were 41% and 59% have met with road traffic accident.

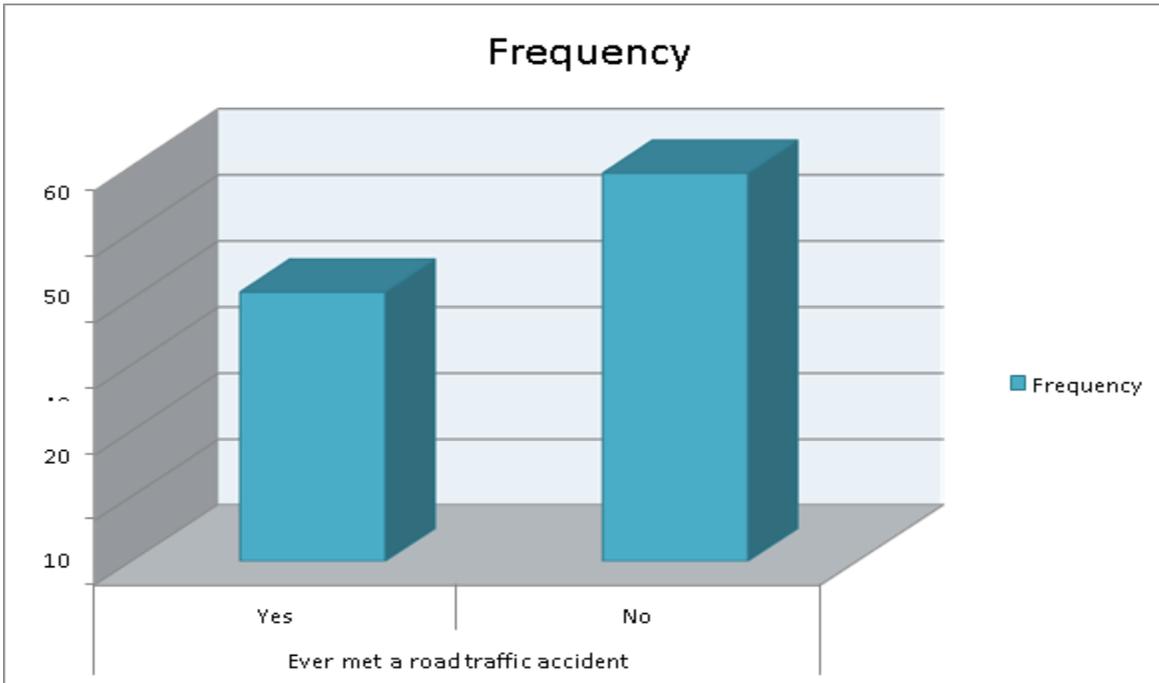


Figure no.5: Bar graph showing percentage distribution of secondary school students who have ever met a road traffic accident

Table – 5: Frequency and percentage distribution of secondary school students according to their previous information regarding traffic safety rules.

Variables	Category	Frequency	Percentage
Previous information regarding traffic safety rules	Yes	80	80%
	No	20	20%
	Total	100	100%

From the above table 5- it is evident that majority of secondary school students i.e., 80% students were having previous information regarding traffic safety rules, 20% were not having previous knowledge regarding traffic safety rules.

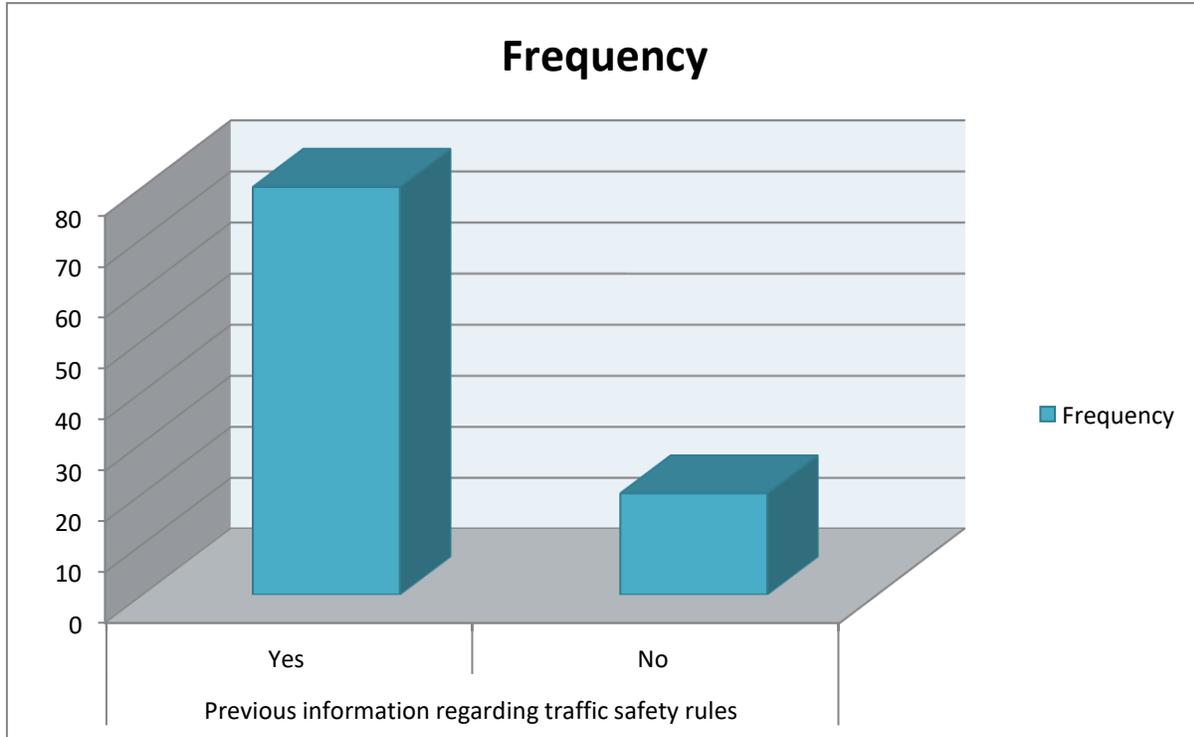


Figure no.6: Bar graph showing percentage distribution of secondary school students according to their previous information regarding road traffic safety rules.

Table – 6: Frequency and percentage distribution of secondary school students according to the source of information regarding road safety rules.

Variables	Category	Frequency	Percentage
Source of information	Book	35	35%
	Internet	25	25%
	Television	8	8%
	Other	32	32%
	Total	100	100%

From the above table 6- it is evident that majority of secondary school students i.e., 35% were having source of information regarding road traffic safety rules by book, 25% students were having information through internet, 8% students were information by television, 32% were having through other source.

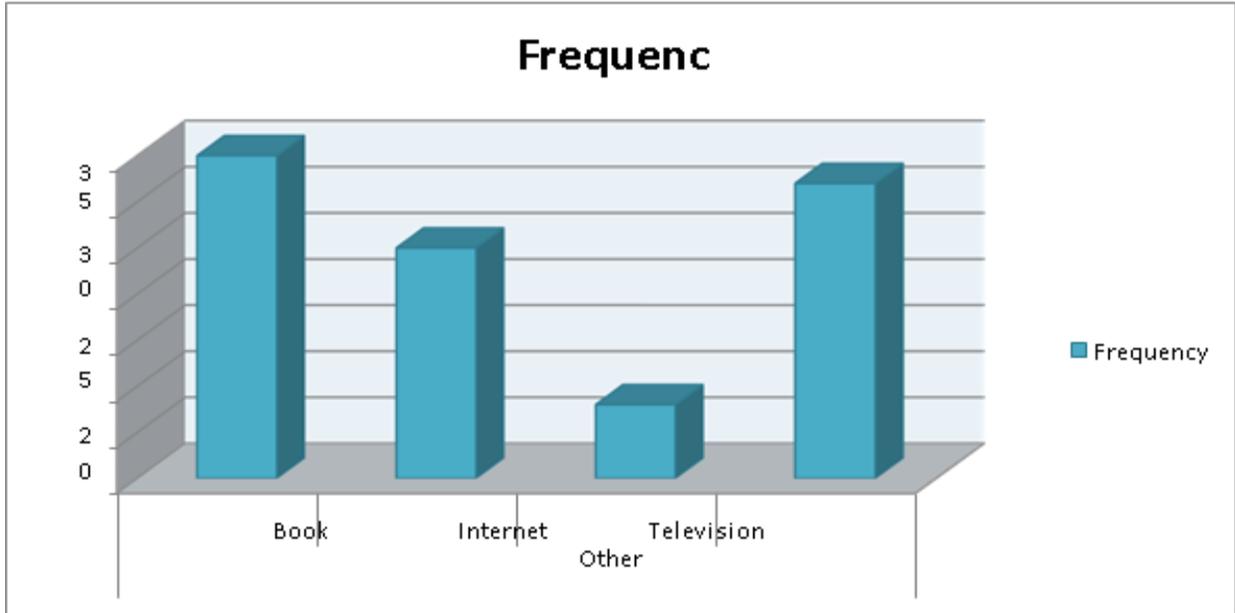


Figure no.7: Bar graph showing percentage distribution of secondary school students according to source of information regarding road traffic safety rules.

Table - 7: Frequency and percentage distribution of secondary school students according to the distance of school from their home.

Variables	Category	Frequency	Percentage
Source of information	<500 meter	52	52%
	500-1000 meter	17	17%
	>1000 meter	31	31%
	Total	100	100%

From the above table 7- it is evident that 52% of secondary school student having the distance of school from their home more than 500 meter, 17% students were having distance of school from their home 500-1000 meter, 31% students were having distance of school from their home >1000 meter.

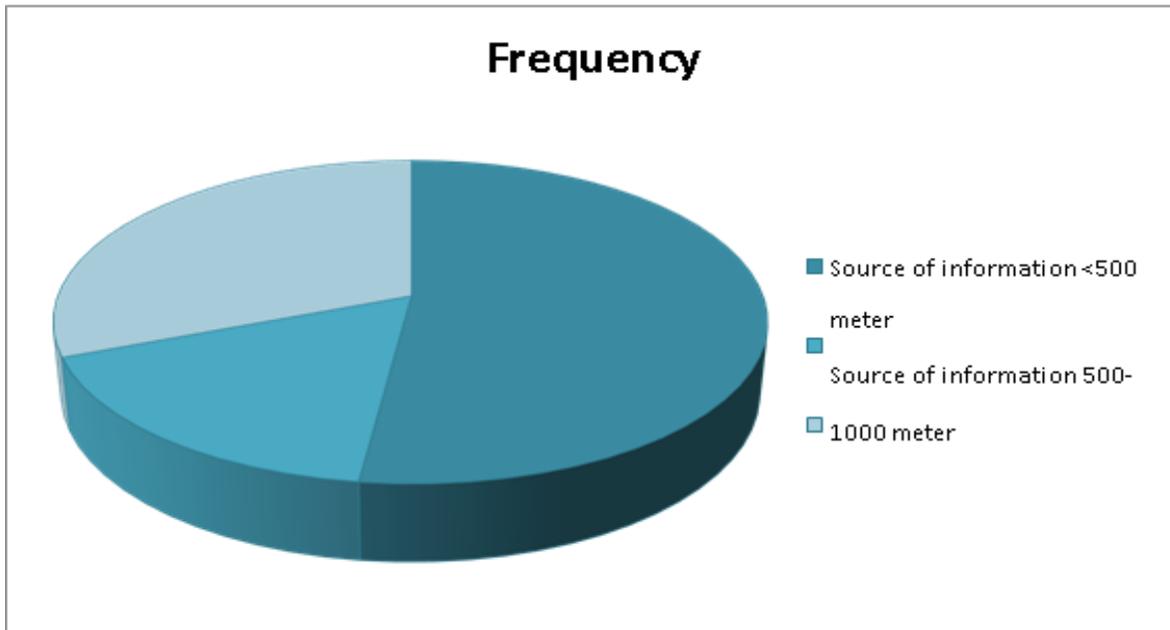


Figure no.8: Bar graph showing percentage distribution of secondary school students according to the distance of school from their home.

of school from their home.

SECTION –B

Assessment of knowledge score regarding road traffic safety rules among secondary school students

Tables - 8: Assessment of knowledge score regarding road traffic safety rules among secondary school students.

Knowledge score	Frequency	Percentage	SD ± Mean
Adequate	87	87%	0.831±13.63
Inadequate	13	13%	

From the above table 8- evident that 87% students were having adequate knowledge and 13% students were having inadequate knowledge.

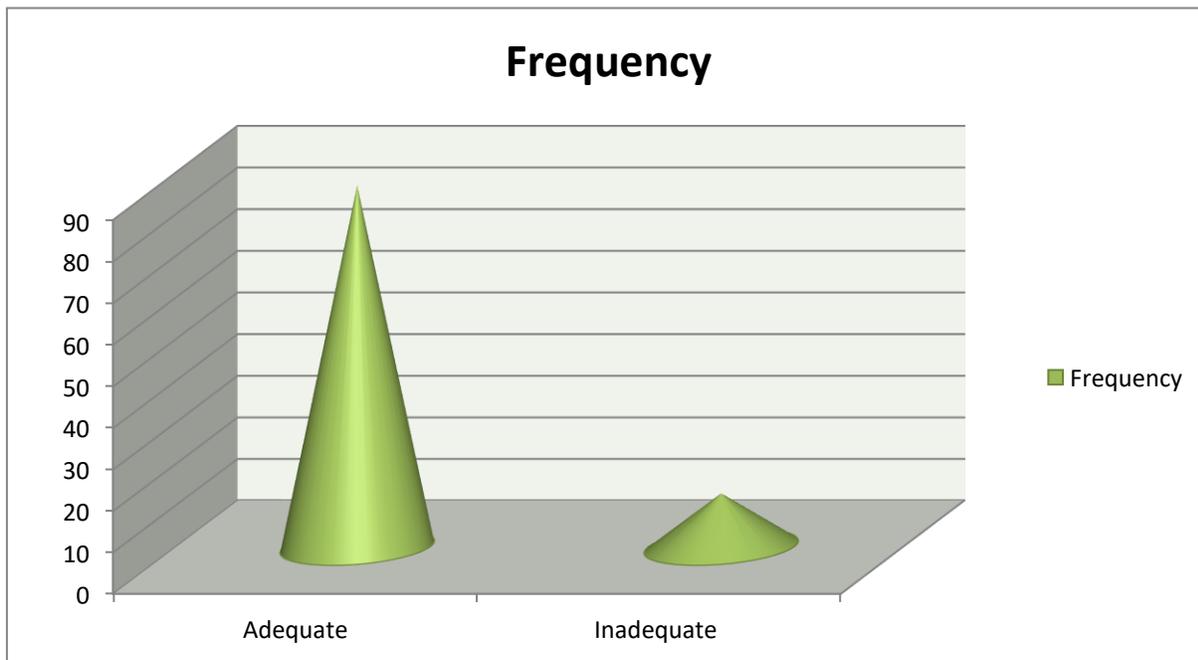


Figure no.9: Bar graph shows that 87% students were having adequate knowledge and 13% students were having inadequate knowledge.

SECTION – C

Assessment of attitude score regarding road traffic rules among secondary school students

Tables - 9: Assessment of attitude score regarding road traffic safety rules among secondary school students.

S. No.	Questions	Agree	Uncertain	Disagree
1	Road signs should be followed in emergency situation.	61	7	32
2	In emergency situation, we should use mobile phones while driving.	51	10	39
3	Wearing helmet is necessary even for 100 meters ride.	72	7	21
4	Listening to music using earphones while driving for long distance is allowed.	10	4	86
5	It is necessary to have a driving license while driving a vehicle.	90	2	8
6	Stick to zebra crossing while crossing a road is unnecessary.	89	5	6
7	It is necessary to use indicators while taking turns.	91	4	5
8	It is necessary to blow horn before overtaking.	84	5	11
9	Following road traffic rules and regulation can reduce accidents.	79	8	13
10	Distraction is the major cause for road accidents.	67	15	18

Description according to the level of attitude on traffic safety rules, N = 100.

Attitude score	Frequency	percentage	SD ± Mean
Favorable attitude	93	93%	3.009±15.85
Unfavorable attitude	7	7%	

From above table no. 10 evident that 93% were having favorable attitude and 7% were having unfavorable attitude.

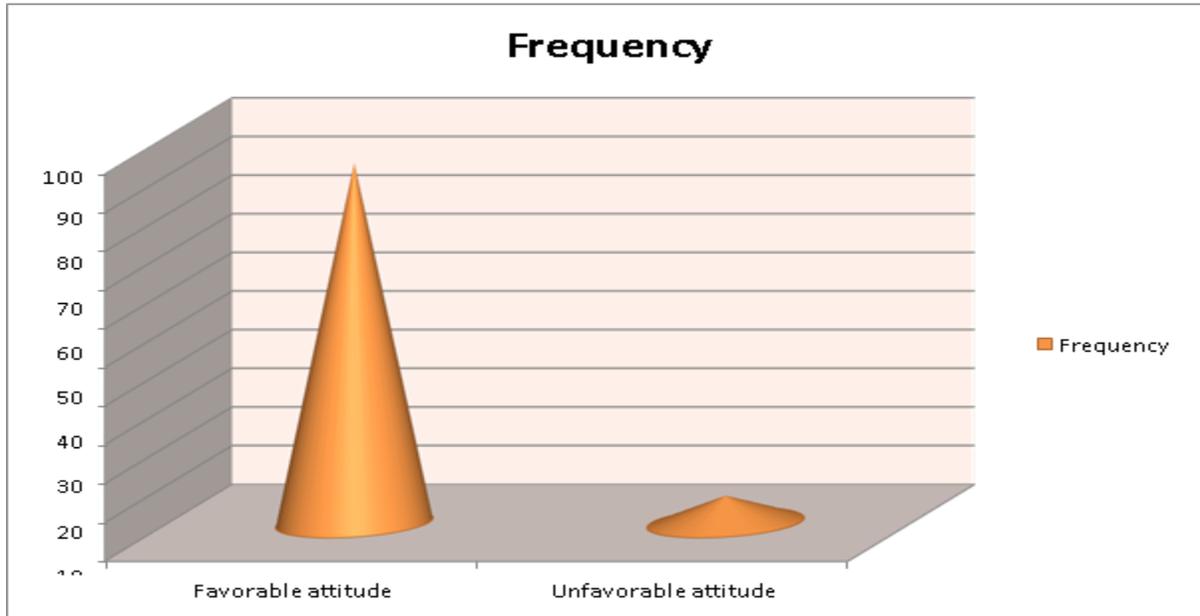


Figure no.10: Bar graph shows that 93% students were having favourable attitude and 7% students were having unfavourable attitude.

SECTION – D

Association between knowledge score with their demographic variables

Table no.11 – Association between knowledge score with their demographic variables.

S.no	Demographic variables	Categories	Adequate	Inadequate	Total	Chi square
1	Age	(a) 15 yr	37	4	41	61.796
		(b) 16 yr	13	7	20	
		(c) 17 yr	19	1	20	
		(d) 18 yr	18	1	19	
2	How do you come to school from home ?	(a) with parent	6	1	7	0.007
		(b) self	81	12	93	
3	What is your mode of Travelling?	(a) bicycle	36	6	42	2.29
		(b) motor bike	8	2	10	
		(c) scooty	1	1	2	
		(d) pedestrian	42	4	46	
4	Have you ever met a road traffic accidents?	(a) yes	33	8	41	37.99
		(b) no	54	5	59	
5	Do you have a previous information regarding Traffic safety rules?	(a) yes	68	12	80	20.6
		(b) no	19	1	20	
6	If yes, then what is the source of information regarding road safety Rules?	(a) book	30	5	35	3.587
		(b) internet	23	2	25	
		(c) television	6	2	8	
		(d) other	28	4	32	
7	How far is the school from your home?	(a) less than 500	48	4	52	9.28
		(b) 500-1000 met	12	5	17	
		(c) more than 100	27	4	31	

df =1at the level of p< 0.05 df =2 at the level of p< 0.05 df =3 at the level of p< 0.05

Table no.11 shows that there is significant association between knowledge score and demographic variable such as age ($\chi^2= 61.796$), road traffic accidents ($\chi^2= 37.9945$), previous information regarding traffic safety rules ($\chi^2= 20.6$) , school distance from home ($\chi^2 = 9.82$) and there was no association with other variables .

SECTION – E

Association between attitude score with their demographic variables

Table no.12: Association between attitude score with their demographic variables.

S.no	demographic variables	Categories	favorable	Unfavorable	Total	chi square
1	Age	(a) 15 yr (b) 16 yr (c) 17 yr (d) 18 yr	37 18 19 19	4 2 1 0	41 20 20 19	2.27
2	How do you come to school from home?	(a) with parent (b) self	7 86	0 7	7 93	0.56
3	What is your mode of Travelling?	(a) bicycle (b) motor bike (c) Scooty (d) pedestrian	41 9 2 41	1 1 0 5	42 10 2 46	2.822
4	Have you ever met a road traffic accident?	(a) yes (b) no	39 54	2 5	41 59	0.4806
5	Do you have any previous information regarding traffic safety rules?	(a) yes (b) no	79 14	6 1	85 15	0.152
6	If yes, then what is the source of information regarding road safety rules?	(a) book (b) internet (c) television (d) other	33 21 8 31	2 4 0 1	35 25 8 32	4.424
7	How far is the school from your home?	(a) < 500meter (b)500-1000 meter (c) >1000 meter	48 15 30	4 2 1	52 17 31	0.7658

df =1at the level of p< 0.05 df =2 at the level of p< 0.05 df =3 at the level of p< 0.05

The above table no.12 shows that there is significant association between attitude score and demographic variables such as previous information regarding traffic safety rules ($\chi^2=0.152$) and source of information regarding road safety rules ($\chi^2=4.424$) and there was no association with other variables.

DISCUSSION

Discussion of the study findings were organised under following objectives:

To assess the level of knowledge regarding road traffic safety rules among secondary school students.

To assess the attitude regarding road traffic safety rules among secondary school students.

To find the association between the knowledge score and selected demographic variables.

To find the association between the attitude score and selected demographic variables.

OBJECTIVE – 1: To assess the level of knowledge regarding road traffic safety rules among secondary school students.

The present study revealed that the entail adequate knowledge score was 87% and inadequate knowledge score was 13%.

These study findings were consistent with study conducted by Sathiyabama Gunasegaram – 2018. A descriptive study to uses knowledge regarding road safety among Peri urban school children at Kilchery revealed that inadequate knowledge is 50% moderate knowledge is 49% and adequate knowledge is 1%.

OBJECTIVE – 2: To assess the attitude regarding road traffic safety rules among students.

The present study revealed that favorable attitude school is 93% and unfavorable attitude score is 7%.

The present study is supported by the study conducted by Amala Shaji, Terry Joseph – 2019. A descriptive study to assess the knowledge and attitude regarding traffic safety rules at Karnataka India revealed that favorable attitude school is 91% and unfavorable is 9%.

OBJECTIVE – 3: To find the association between the knowledge score and selected demographic variables. The analysis has found significant association between Age, road traffic accidents, previous information regarding traffic safety rules, sources of information regarding road safety rules and there is no significant variables between others variables. In this study, the calculated χ^2 value of Age is 61.79636, the χ^2 value coming to school from home is 0.00700, mode of travelling ($\chi^2 = 2.292$), road traffic accident ($\chi^2=37.9945$) previous information regarding traffic safety rules ($\chi^2= 20.6$), sources of information regarding road safety rules ($\chi^2 = 3.587$) and school distance from home ($\chi^2=9.28$). Thus it was found there is significant association between knowledge score and demographic variable such as age ($\chi^2= 61.796$), road traffic accidents ($\chi^2= 37.9945$), previous information regarding traffic safety rules ($\chi^2= 20.6$), school distance from home ($\chi^2 = 9.82$) and there was no association with other variables.

The study findings supported by Amala Shaji, Terry Joseph – 2019, the data presented in the table 6 shows that there was a significant association between knowledge score and demographical variable such as age ($\chi^2=0.044$), information regarding traffic safety rules ($\chi^2=0.043$) and there was no association with the other demographic variable.

OBJECTIVE – 4: To find the association between the attitude score and selected demographic variables. In this study the calculated χ^2 value is Age is 2.27, the χ^2 value coming to school from home is 0.56, mode of travelling ($\chi^2 = 2.822$), road traffic accident ($\chi^2= 0.4806$), previous information regarding traffic safety rules ($\chi^2= 0.152$), sources of information regarding road safety rules ($\chi^2 = 4.424$) and school distance from home ($\chi^2= 0.768$). The analysis has found that there is significant association between attitude score and demographic variables such as previous information regarding traffic safety rules ($\chi^2=0.152$) and source of

information regarding road safety rules ($\chi^2=4.424$) and there was no association with other variables.

The study findings supported by Amala Shaji, Terry Joseph – 2019, the study shows that there was significant association between level of attitude and selected demographic variable such as source of information regarding road safety rules ($\chi^2= 0.018$) and there was no association with other demographic variables.

CONCLUSION

Based on the analysis of the study, the following inference was drawn. The finding showed that the majority of secondary school students had adequate knowledge regarding road traffic safety rules. Although they had gained knowledge on road traffic safety rules, there are still much more scope for improving their knowledge especially in practical field. The main interest of the study is to make the secondary school students aware about the road traffic safety rules by practicing themselves. So, the study state that proper knowledge helps to gain the confidence to practice road traffic safety rules in practical lives and can reduce the incidence rate of road traffic accident.

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